

WHAT IS CLAIMED IS:

1. A living body information detecting terminal control system, comprising:

a living body information detecting terminal comprising:

at least one living body information detecting sensor, the living body information detecting sensor serving to detect a living body information signal of a wearer; and

means for transmitting living body information data to a living body information monitoring device;

the living body information monitoring device that, after receiving the living body information data transmitted from the living body information detecting terminal, stores the living body information data in a storage device within the living body information monitoring device for a predetermined time, and includes means for transmitting the living body information data to a host server through a public line; and

the host server that, after receiving the living body information data transmitted from the living body information monitoring device, stores the living body information data in a storage device within the host server, or displaying the living body information data on a display device connected to the host server directly or through a network,

wherein the living body information detecting terminal control system controls an operation of the living body information

detecting terminal itself after the living body information detecting terminal detects the living body information signal.

2. A living body information detecting terminal control system, comprising:

a living body information detecting terminal comprising:

at least one living body information detecting sensor, the living body information detecting sensor serving to detect a living body information signal of a wearer; and

means for transmitting living body information data to a living body information monitoring device;

the living body information monitoring device that, after receiving the living body information data transmitted from the living body information detecting terminal, stores the living body information data in a storage device within the living body information monitoring device for a predetermined time, and includes means for transmitting the living body information data to a host server through a public line; and

the host server that, after receiving the living body information data transmitted from the living body information monitoring device, stores the living body information data in a storage device within the host server, or displaying the living body information data on a display device connected to the host server directly or through a network,

wherein, after receiving the living body information data from the living body information detecting terminal, the living body information monitoring device transmits living body information detecting terminal control data, which is used to control drive of the living body information detecting sensor of the living body information detecting terminal, to the living body information detecting terminal.

3. A living body information detecting terminal control system according to claim 2, wherein the living body information detecting terminal further comprises:

at least one living body information detecting sensor;

an A/D converter unit for converting a living body analog signal obtained from the living body information detecting sensor into a living body digital signal;

a living body digital signal control unit for processing the living body digital signal to prepare living body digital signal processed data, and performing control of the living body digital signal;

a ROM having a data structure comprising at least one of wearer identification information specific to the wearer, a living body information operational expression, and living body information detecting terminal identification information;

a first memory unit comprising a RAM for storing living body

digital data composed of the living body digital signal or the living body digital signal processed data for a predetermined time;

a living body information sensor control unit for controlling drive of each living body information detecting sensor composing a living body information detecting sensor unit, based on the living body information detecting terminal control data received from the living body information monitoring device or a control content set with respect to the living body information detecting terminal by the wearer;

a living body information data transmitter/receiver unit for transmitting or receiving data to or from the living body information monitoring device; and

a first central processing unit for controlling the A/D converter unit, the first memory unit, the living body digital signal control unit, the living body information sensor control unit, and the living body information data transmitter/receiver unit.

4. A living body information detecting terminal control system according to claim 3, wherein:

the living body information detecting terminal further comprises:

a first living body information data judging unit for comparing the living body digital data with a preset value range

and outputting a comparison result; and

a living body information detecting sensor control unit for controlling the drive of the living body information detecting sensor based on the comparison result; and

the living body information detecting sensor control unit controls each living body information detecting sensor based on living body information detecting terminal control data received from the living body information monitoring device, a judgment value obtained from the first living body information data judging unit, or the control content set by the wearer.

5. A living body information detecting terminal control system according to claim 4, wherein the living body digital signal control unit of the living body information detecting terminal comprises:

a living body digital data processing function for performing data processing on the living body digital signal; and

an normal-time living body information transmitting function for storing the living body digital signal processed data obtained by the living body digital data processing function or living body digital data composed of the living body digital signal in the RAM for a predetermined time, and at a predetermined timing or when receiving a polling command transmitted by the living body information monitoring device, transmitting a first normal-time

transmission data composed of at least one of the living body digital data and the wearer identification information to the living body information monitoring device.

6. A living body information detecting terminal control system according to claim 5, wherein the living body information detecting terminal further comprises an abnormal-time living body information transmitting function for:

in a case where a value of the living body digital data is judged to be outside the preset value range in the first living body information data judging unit, outputting an abnormality signal indicating an abnormality from the first living body information data judging unit of the living body information detecting terminal, and immediately transmitting a first abnormal-time transmission data composed of the abnormality signal, the wearer identification information, and the living body digital data; and

in a case where the value of the living body digital data is judged to be within the preset value range in the first living body information data judging unit, deleting the abnormal-time transmission data, or storing the abnormal-time transmission data in the RAM for a predetermined time, and at a predetermined timing or when receiving the polling command transmitted by the living body information monitoring device, transmitting the first

normal-time transmission data to the living body information monitoring device.

7. A living body information detecting terminal control system according to claim 2, wherein the living body information detecting terminal further comprises:

at least one normal-time driving living body information detecting sensor that is driven during normal conditions; and

at least one power-save living body information detecting sensor that is laid in a power-save state with no power supply during normal conditions.

8. A living body information detecting terminal control system according to claim 2, wherein the living body information detecting terminal further comprises:

at least one normal-time driving living body information detecting sensor that is driven during normal conditions; and

at least one power-save living body information detecting sensor that is intermittently driven during normal conditions.

9. A living body information detecting terminal control system according to claim 7, wherein, in a case where an output value of the first living body information data judging unit is an abnormal output value, the living body information sensor control

unit supplies power to the power-save living body information detecting sensor and drives the power-save living body information detecting sensor.

10. A living body information detecting terminal control system according to claim 8, wherein, in a case where an output value of the first living body information data judging unit is an abnormal output value, the living body information sensor control unit performs control by a control method based on at least one of a measuring interval, a measuring time, and a data sampling frequency for an intermittent driving living body information detecting sensor.

11. A living body information detecting terminal control system according to claim 2, wherein the living body information detecting terminal selects a first living body information detecting sensor from the living body information sensors based on an output result from the first living body information data judging unit, and transmits the selection result to the living body information monitoring device through the living body information data transmitter/receiver unit.

12. A living body information detecting terminal control system according to claim 2, wherein the living body information



detecting terminal further comprises a call button that enables a sensor operation control by being pressed.

13. A living body information detecting terminal control system according to claim 2, wherein the living body information detecting terminal transmits the living body information data to the living body information monitoring device based on the living body information signal detected by the living body information detecting sensor, or controls the drive of the living body information detecting sensor based on an instruction from the living body information detecting terminal itself.

14. A living body information detecting terminal control system according to claim 2, wherein at least one living body information detecting sensor of sensors composing a living body information detecting sensor unit of the living body information detecting terminal is a sensor for detecting a pulse.

15. A living body information detecting terminal control system according to claim 2, wherein at least one living body information detecting sensor of sensors composing a living body information detecting sensor unit of the living body information detecting terminal is a sensor for detecting a blood sugar level or a blood glucose concentration.

16. A living body information detecting terminal control system according to claim 2, wherein at least one living body information detecting sensor of sensors composing a living body information detecting sensor unit of the living body information detecting terminal is a sensor for detecting a moving state of the wearer.

17. A living body information detecting terminal control system according to claim 2, wherein the living body information monitoring device comprises:

- a second transmitter/receiver unit for transmitting/receiving the living body information data to/from the living body information detecting terminal;

- a living body digital signal processed data preparing unit for processing the living body digital data received from each living body information detecting sensor to prepare a second living body digital signal processed data;

- a second memory unit comprising:

- a ROM having data with a data structure composed of at least one of:

- living body information monitoring device identification information specific to the living body information monitoring device;

an operational expression for data processing;

a value range preset for the living body information data received from each living body information detecting sensor or second living body information data composed of the second living body information processed data; and

a table for identifying the wearer based on the wearer identification information that is recorded in the ROM of the living body information detecting terminal; and

a RAM for storing the second living body information data for a predetermined time;

a second living body information data judging unit for judging a control method for the living body information monitoring device, and when receiving a first abnormal-time transmission data transmitted by the living body information monitoring device, comparing the second living body information data with the preset value range stored in the ROM for judgment;

a first living body information detecting terminal control unit that prepares living body information detecting terminal control data for controlling the living body information detecting terminal based on a judgment result from the second living body information data judging unit;

a first public line connecting unit for connecting to the host server through a public line; and

a second central processing unit for controlling the second

transmitter/receiver unit, the second memory unit, the second judging unit, the second signal control unit, the first living body information detecting terminal control unit, and the first public line connecting unit.

18. A living body information detecting terminal control system according to claim 17, wherein:

when the second living body information data is judged as being outside the value range preset by the second living body information data judging unit, the living body information monitoring device transmits a signal indicating an abnormality and a second abnormal-time transmission data composed of the wearer identification information, the living body information detecting terminal identification information, and the second living body information data, to the host server through the first public line connecting unit; and

when the second living body information data is judged as being within the value range preset by the second living body information data judging unit, the living body information monitoring device stores the second living body information data in the RAM for a predetermined time, and at a predetermined timing or in accordance with reception of a polling command received from the host server, transmits a second living body information data stored in the RAM and a second normal-time transmission data

composed of the wearer identification information and the living body information detecting terminal identification information, to the host server through the first public line connecting unit.

19. A living body information detecting terminal control system according to claim 17, wherein, in the living body information monitoring device in a case where the second living body information data is judged as being outside the value range preset by the second living body information data judging unit, and the second abnormal-time transmission data is transmitted to the host server:

the second living body information data judging unit has a function of determining an abnormal level taking as a criterion at least one of a type of the living body information detecting sensor exhibiting an abnormality and a differential of the second living body information data with respect to the preset value range;

the living body digital signal processed data preparing unit adds an abnormality signal corresponding to the abnormal level to the second abnormal-time transmission data; and

the second transmitter/receiver unit transmits the second abnormal-time transmission data.

20. A living body information detecting terminal control system according to claim 17, wherein:

the first living body information detecting terminal control unit comprises a first sensor determining means for, based on the wearer identification information received from the second transmitter/receiver unit, selecting and determining one of a first normal-time driving living body information detecting sensor and the second living body information detecting sensor that is in a power-save state with no power supplied during normal conditions or is intermittently driven, from among the living body information detecting sensors included in the living body information detecting terminal; and

the first living body information detecting terminal control unit transmits the second abnormal-time transmission data to the living body information detecting terminal based on a determination result from the sensor determining means.

21. A living body information detecting terminal control system according to claim 17, wherein the first living body information detecting terminal control unit further comprises:

a first determining means for, when the second transmitter/receiver unit receives the first abnormal-time transmission data from the living body information detecting terminal, selecting and determining the living body information detecting sensor to be driven from among the second living body information detecting sensors that are included in the living body

information detecting terminal and are in a power-save state during normal conditions; and

a first control signal generating means for generating a signal that drives the selected second living body information detecting sensor.

22. A living body information detecting terminal control system according to claim 17, wherein the first living body information detecting terminal control unit further comprises:

a first determining means for, when the second transmitter/receiver unit receives the first abnormal-time transmission data from the living body information detecting terminal, selecting and determining the living body information detecting sensor to be changed in at least one of a measuring interval, a measuring time, and a data sampling frequency, from among the second living body information detecting sensors that are intermittently driven during normal conditions within the living body information detecting terminal; and

a first control signal generating means for, based on a result from the first determining means, generating a signal for changing at least one of the measuring interval, the measuring time, and the data sampling frequency of the selected second living body information detecting sensor.

23. A living body information detecting terminal control system according to claim 17, wherein the living body information monitoring device further comprises a call button that enables operation control of a sensor by being pressed.

24. A living body information detecting terminal control system according to claim 2, wherein the living body information monitoring device performs a sensor operation control in response to a signal detected by the living body information detecting terminal.

25. A living body information detecting terminal control system according to claim 2, wherein, when an output from the first living body information detecting sensor is judged as being outside the preset value range, the living body information sensor control unit within the living body information detecting terminal or the first living body information detecting terminal control unit within the living body information monitoring device performs a control such that a measuring interval of the second living body information detecting sensor becomes shorter than the measuring interval required during normal conditions.

26. A living body information detecting terminal control system according to claim 2, wherein, when an output from the first



living body information detecting sensor is judged as being outside the preset value range, the living body information sensor control unit within the living body information detecting terminal or the first living body information detecting terminal control unit within the living body information monitoring device performs a control such that a measuring time of the second living body information detecting sensor becomes longer than the measuring time required during normal conditions.

27. A living body information detecting terminal control system according to claim 2, wherein, when an output from the first living body information detecting sensor is judged as being abnormal, the living body information sensor control unit within the living body information detecting terminal or the first living body information detecting terminal control unit within the living body information monitoring device performs a control such that a data sampling frequency of the second living body information detecting sensor becomes higher than the data sampling frequency required during normal conditions.

28. A living body information detecting terminal control system according to claim 2, wherein the living body information sensor control unit included in the living body information detecting terminal or the first living body information detecting

terminal control unit included in the living body information monitoring device causes control of the second living body information detecting sensor to return to a preset reference control state, in a case where an output from the first living body information detecting sensor is judged as being outside the preset value range by the first judging unit or the second judging unit, and the output from the first living body information detecting sensor is again judged as being within the preset value range with respect to the second living body information detecting sensor in which at least one of the measuring interval, the measuring time, and the data sampling frequency is controlled.

29. A living body information detecting terminal control system according to claim 2, wherein the first living body information detecting terminal control unit further comprises:

a first sensor operation verification signal generating means for generating a verification signal that serves to regularly verify a breakdown condition or a drive condition of each living body information detecting sensor within the living body information detecting terminal; and

a first drive condition judging means for, after the living body information detecting sensor control unit included in the living body information detecting terminal verifies a breakdown condition or a drive condition of each living body information

detecting sensor in response to the operation verification signal and receives a sensor operation verification result signal to be transmitted, judging the breakdown condition or the drive condition of the sensor from the living body information detecting sensor operation verification result signal.

30. A living body information detecting terminal control system according to claim 2, wherein the host server comprises:

a third memory unit comprising:

a ROM in which the wearer identification information transmitted from the living body information monitoring device, a table for identifying the wearer from the living body information monitoring device identification information, and the polling timing are previously recorded; and

a RAM for storing a second living body information data transmitted from the living body information monitoring device;

a second public line connecting unit for receiving the second normal-time transmission data or the second abnormal-time transmission data that are transmitted from the living body information monitoring device through the public line, and transmitting a polling command to the living body information monitoring device at the polling timing previously recorded in the ROM provided to the host server;

a display unit for displaying the second normal-time

transmission data or the abnormal-time transmission data that are received from the living body information monitoring device;

a third signal control unit for performing a signal control by determining whether the second normal-time transmission data or the abnormal-time transmission data that are received from the living body information monitoring device are stored in the memory unit or displayed on the display unit;

a second living body information detecting terminal control unit for generating a signal for controlling the living body information detecting terminal; and

a third central processing unit for controlling the third memory unit, the second public line connecting unit, the display unit, the third signal control unit, and the second living body information detecting terminal control unit.

31. A living body information detecting terminal control system according to claim 30, wherein the second living body information detecting terminal control unit comprises:

the second determining means for, based on the identification information specific to the living body information monitoring device and the wearer identification information that are received by the second public line connecting unit, determining one of the first living body information detecting sensor that is driven during normal conditions and the second living body information detecting

sensor that is in a power-save state with no power supply or is intermittently driven during normal conditions, from among the living body information detecting sensors included in the living body information detecting terminal; and

the second control signal generating means for generating a sensor control signal that is transmitted directly to the living body information detecting terminal or transmitted to the living body information monitoring device.

32. A living body information detecting terminal control system according to claim 31, wherein the second living body information detecting terminal control unit further comprises:

a second living body information detecting sensor operation verification signal generating means for generating a verification signal that serves to regularly verify a breakdown condition or a drive condition of each living body information detecting sensor included in the living body information detecting terminal; and

a second drive condition judging means for, after the living body information detecting sensor control unit included in the living body information detecting terminal verifies a breakdown condition or a drive condition of each living body information detecting sensor in response to the operation verification signal and receives a living body information detecting sensor operation verification result signal to be transmitted, judging the breakdown

condition or the drive condition of the sensor from the living body information detecting sensor operation verification result signal.

33. A living body information detecting terminal control system according to claim 32, wherein, in a case where an output signal from the first living body information detecting sensor exceeds a preset reference value range, or in a case where a difference with respect to an output signal previously outputted from the living body information detecting sensor exceeds a preset variation range, the first judging unit included in the living body information detecting terminal or the second judging unit included in the living body information monitoring device judges the output signal to be abnormal.